

Message

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**From:** Strynar, Mark [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=5A9910D5B38E471497BD875FD329A20A-STRYNAR, MARK]  
**Sent:** 10/2/2018 1:46:54 PM  
**To:** Leung, Lam-Wing H [LAM.H.LEUNG-1@chemours.com]; McCord, James [mccord.james@epa.gov]  
**Subject:** RE: Meeting and past Chemours groundwater testing info

Hi Lam,

I am not sure if we have sample remaining from May 2017 to give to you. Let me take a look. It is possible that Detlef has some. He collected a lot more than we did for his batch experiments.

Mark

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**From:** Leung, Lam-Wing H [mailto:LAM.H.LEUNG-1@chemours.com]  
**Sent:** Tuesday, October 02, 2018 9:26 AM  
**To:** McCord, James <mccord.james@epa.gov>; Strynar, Mark <Strynar.Mark@epa.gov>  
**Subject:** RE: Meeting and past Chemours groundwater testing info

Hi James & Mark,

Thank you and as I mentioned previously, I'll be more than happy to review your paper!?

I will share with you the report we provided to NCDEQ regarding Cape Fear River studies we had conducted and I think both of you will find it to be helpful.

Lastly, would it be possible for you to share a sample of the May 2017 river water as we'd very much like to analyze for that. Please let me know.

Best Regards,  
Lam

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**From:** McCord, James [mailto:mccord.james@epa.gov]  
**Sent:** Tuesday, October 2, 2018 8:25 AM  
**To:** Strynar, Mark <Strynar.Mark@epa.gov>; Leung, Lam-Wing H <LAM.H.LEUNG-1@chemours.com>  
**Subject:** RE: Meeting and past Chemours groundwater testing info

The exact sampling dates are not shared in the paper because I handled the data ordinarily rather than as actual dates. The analyzed water was subsampled from what NCDEQ provided us for their monitoring throughout the summer, plus two bracketed samples that we collected ourselves, one in May 2017 the other in February 2018.

As Mark said, we should be through clearance and ready for submission by the end of the week.

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James McCord

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**From:** Strynar, Mark  
**Sent:** Tuesday, October 2, 2018 8:10 AM  
**To:** Leung, Lam-Wing H <LAM.H.LEUNG-1@chemours.com>; McCord, James <mccord.james@epa.gov>  
**Subject:** RE: Meeting and past Chemours groundwater testing info

Lam,

Not sure if James shared this with you. I also am not sure if we share the sampling dates in the paper. It has not yet been cleared for submission yet. I know there is a deadline this week for comments back from the EPA's office of water. Hopefully it will be submitted soon.

Mark

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**From:** Leung, Lam-Wing H [<mailto:LAM.H.LEUNG-1@chemours.com>]  
**Sent:** Monday, October 01, 2018 8:11 AM  
**To:** McCord, James <[mccord.james@epa.gov](mailto:mccord.james@epa.gov)>; Strynar, Mark <[Strynar.Mark@epa.gov](mailto:Strynar.Mark@epa.gov)>  
**Subject:** RE: Meeting and past Chemours groundwater testing info

Hi Mark & James,

Thank you again for the information and will it be possible for you to share with me the sampling dates for the different events you mentioned in your charts? I supposed this is discussed in your upcoming paper and if so, has it be accepted for publication? Many thanks.

Best Regards,  
Lam

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**From:** McCord, James [<mailto:mccord.james@epa.gov>]  
**Sent:** Monday, September 17, 2018 8:02 AM  
**To:** Leung, Lam-Wing H <[LAM.H.LEUNG-1@chemours.com](mailto:LAM.H.LEUNG-1@chemours.com)>; Strynar, Mark <[Strynar.Mark@epa.gov](mailto:Strynar.Mark@epa.gov)>  
**Subject:** RE: Meeting and past Chemours groundwater testing info

Lam,

I had run a clustering analysis on the time-trend relative abundance of the different compounds that we identified. The graphs are attached, clustered by similarity in trend, structures where known, formulas otherwise. You are correct that most of the species are nearly undetectable after the first sampling event(s).

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James McCord

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**From:** Leung, Lam-Wing H [<mailto:LAM.H.LEUNG-1@chemours.com>]  
**Sent:** Friday, September 14, 2018 10:21 AM  
**To:** Strynar, Mark <[Strynar.Mark@epa.gov](mailto:Strynar.Mark@epa.gov)>; McCord, James <[mccord.james@epa.gov](mailto:mccord.james@epa.gov)>  
**Subject:** RE: Meeting and past Chemours groundwater testing info

Hi Mark & James,

I hope you and all your colleagues are all safe and well with Florence.

Couple questions regarding the list you sent me:

1. Can you share with me the relative peak area of these analytes?
2. I'm curious as to know if you have analyzed more recent river water samples and see if you have detected any of these analytes (my guess is that the number of analytes would be much much lower).

Best Regards,  
Lam

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**Lam Leung, Ph.D.**

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**From:** Strynar, Mark [<mailto:Strynar.Mark@epa.gov>]

**Sent:** Friday, September 7, 2018 9:52 AM

**To:** Leung, Lam-Wing H <[LAM.H.LEUNG-1@chemours.com](mailto:LAM.H.LEUNG-1@chemours.com)>; McCord, James <[mccord.james@epa.gov](mailto:mccord.james@epa.gov)>

**Subject:** RE: Meeting and past Chemours groundwater testing info

James,

Can you make a mass list of all these analytes so we can go back in re-query the GW results from the Fayetteville on site wells. Then we can tell Lam whether or not we see these other chemicals in the GW as well.

Mark

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**From:** Leung, Lam-Wing H [<mailto:LAM.H.LEUNG-1@chemours.com>]

**Sent:** Thursday, September 06, 2018 12:53 PM

**To:** McCord, James <[mccord.james@epa.gov](mailto:mccord.james@epa.gov)>; Strynar, Mark <[Strynar.Mark@epa.gov](mailto:Strynar.Mark@epa.gov)>

**Subject:** RE: Meeting and past Chemours groundwater testing info

Thank you James. That's very helpful.

Lam

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**From:** McCord, James [<mailto:mccord.james@epa.gov>]

**Sent:** Thursday, September 6, 2018 12:22 PM

**To:** Leung, Lam-Wing H <[LAM.H.LEUNG-1@chemours.com](mailto:LAM.H.LEUNG-1@chemours.com)>; Strynar, Mark <[Strynar.Mark@epa.gov](mailto:Strynar.Mark@epa.gov)>

**Subject:** RE: Meeting and past Chemours groundwater testing info

These are only compounds found in the river from a Grab sample in May of last year, before the Star News article was published.

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James McCord

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**From:** Leung, Lam-Wing H [<mailto:LAM.H.LEUNG-1@chemours.com>]

**Sent:** Thursday, September 6, 2018 8:08 AM

**To:** McCord, James <mccord.james@epa.gov>; Strynar, Mark <Strynar.Mark@epa.gov>

**Subject:** RE: Meeting and past Chemours groundwater testing info

Hi Mark & James,

Thanks again for the info, my only question is are these collection of compounds found in the ground/well water on Fayetteville site or these were found in the river water samples?

Best Regards,  
Lam

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**From:** McCord, James [mailto:mccord.james@epa.gov]

**Sent:** Tuesday, September 4, 2018 12:12 PM

**To:** Strynar, Mark <Strynar.Mark@epa.gov>; Leung, Lam-Wing H <LAM.H.LEUNG-1@chemours.com>

**Subject:** RE: Meeting and past Chemours groundwater testing info

This is the master list.

Contains predicted formula and some class information where available. CAS if we found one that matched, neutral mass for all of them. Letters indicate distinct chromatographically resolved isomers.

Let me know if you need anything else.

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James McCord

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**From:** Strynar, Mark

**Sent:** Tuesday, September 4, 2018 11:52 AM

**To:** Leung, Lam-Wing H <LAM.H.LEUNG-1@chemours.com>

**Cc:** McCord, James <mccord.james@epa.gov>

**Subject:** RE: Meeting and past Chemours groundwater testing info

Lam,

I have not been able to get the mass list put together. James can you do this and share with Lam. If they are analytes we both know please share name as well. If it is not just give a mass.

Thanks,

Mark

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**From:** Leung, Lam-Wing H [mailto:LAM.H.LEUNG-1@chemours.com]

**Sent:** Tuesday, September 04, 2018 11:34 AM

**To:** Strynar, Mark <Strynar.Mark@epa.gov>

**Subject:** RE: Meeting and past Chemours groundwater testing info

Hi Mark,

It was good meeting up with you and Detlef last week and thanks for the link. As I mentioned during the meeting, our external lab is currently working on lowering the LOQ of the "Table 3" methods via direct injection which I believe it might get to 10-20ppt (for most).

By the way, did you have a chance to go through the list of compounds which you were going to provide me with the mass #s?

Hope you and the family had a great long Labor Day weekend.

Best regards,  
Lam

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**From:** Strynar, Mark [<mailto:Strynar.Mark@epa.gov>]  
**Sent:** Friday, August 31, 2018 7:38 AM  
**To:** Leung, Lam-Wing H <[LAM.H.LEUNG-1@chemours.com](mailto:LAM.H.LEUNG-1@chemours.com)>; Shoemaker, Stephen H <[STEPHEN.H.SHOEMAKER@chemours.com](mailto:STEPHEN.H.SHOEMAKER@chemours.com)>; Garon, Kevin P <[Kevin.Garon@chemours.com](mailto:Kevin.Garon@chemours.com)>  
**Subject:** Meeting and past Chemours groundwater testing info

Lam, Kevin and Stephen,

It was nice to meet with you and Detlef yesterday. Thanks for sharing the GAC treatment data. It looks very promising. It would be great to understand the LOQ of the contract lab method and how it differs from the LOQ of 200 ng/L direct injection method. Concerning the monitoring well data we supplied this info to NCDEQ back on September 13<sup>th</sup>, 2017. The link below is the publicly available PDF of that data.

The sections in grey as you read will be estimated based on HFPO-DA response. Not quantitated with authentic standards. I am going to go back and take a look at a few of these to see what other analytes we saw but did not report. These were the analytes we were asked to report on at that time. I expect compounds such as Hydro EVE or NVHOS may turn up but I am unsure.

Mark

NCDEQ response to me when I asked for the public link:

The map of results on the DEQ GenX webpage. Go to the Groundwater GenX page; it's the second link on the page. The EPA document with GW results, including expanded PFAS compounds, has been made public. It is in our online electronic database:

[http://edocs.deq.nc.gov/WasteManagement/0/edoc/744114/NCD047368642\\_NC%20DEQ%20GW%20Sampling%20Report%20from%20EPA%20Lab\\_20170913.pdf?searchid=f45659bb-78f1-49ef-ac75-ea0f02e8228b](http://edocs.deq.nc.gov/WasteManagement/0/edoc/744114/NCD047368642_NC%20DEQ%20GW%20Sampling%20Report%20from%20EPA%20Lab_20170913.pdf?searchid=f45659bb-78f1-49ef-ac75-ea0f02e8228b)

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